

## MEDICINE TODAY

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California, Nevada and Utah Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

**The Use of Contact Glasses.**—In view of the recent publicity given to the use of contact glasses by an optometry convention, it might be well to define the exact field of these lenses to the profession at large. In the newspaper accounts it was stated that refractive errors would now be able to be corrected by a new type of glasses without a frame which are to be worn in contact with the eye beneath the lids. This statement is rather overdrawn.

Contact glasses have been used by oculists for a number of years, and recent improvements in design by Professor Heine, as carried out by the firm of Zeiss, have made the field of application wider.

At present the contact glass consists of a thin glass cup which is ground with optical precision. This cup consists of a central portion with a curve greater than that of the cornea and with a diameter slightly larger than the cornea, and a less curved surrounding shoulder which rests on the conjunctiva covering the sclera adjacent to the cornea. When the glass is applied to the eye this shoulder extends up under the upper lid and downward beneath the lower lid.

As the curve of the central portion of the contact glass is greater than that of the cornea there is naturally a space between the cornea and the glass when the shoulder is placed in contact with the eyeball. This space is filled with physiological saline solution of which the index of refraction is about that of the cornea. The optical effect of this is to make the glass, space, and cornea practically homogeneous. Thus the anterior refracting surface of the optical system of the eye is transferred from the anterior surface of the cornea to that of the contact glass. This surface is so ground by the manufacturers as to give it the effective curve of a normal nonastigmatic cornea. Thus the application of the contact glass immediately eliminates all abnormalities of refraction which might be caused by irregularities in the anterior corneal surface.

For this reason contact glasses were first used to correct high degrees of irregular corneal astigmatism and for patients with conical cornea. In these cases a marked improvement in vision can be produced, and although the wearing of the glass causes some irritation, certain individuals become able to wear them several hours at a time. O'Rourke has reported the case of a school teacher with conical cornea who could wear one eight hours at a time. In France two cases have been reported where the irritation was so slight that the contact glass could be worn constantly. Numerous patients are able to wear the glasses for periods of several hours. If myopia or hyper-

opia is present, in addition to the corneal error, a correction for this can be ground into the contact glass also.

In many cases of conical cornea the improvement in visual acuity is remarkable. One patient under my care, who had a visual acuity of 2/200 in the afflicted eye, was able to develop 20/30 acuity with the use of the contact glass. Unfortunately she suffered considerable irritation from the glass and was unable to wear it for long periods.

From what has been said so far, it may be easily seen that because of the inconvenience and irritation of contact glasses, as compared with ordinary spectacles, that they will not come into general use for the correction of the usual errors of refraction. But they certainly have a field of application where the lowered visual acuity is due to corneal irregularities, and can often restore an optically disabled individual to useful work.

It is unfortunate that false publicity or exaggerations are circulated by the lay press concerning contact glasses, because in so doing discredit may be cast upon a special means of improving vision which is effective in selected cases. Contact glasses are not of recent origin, nor will they be a substitute for spectacles as now used; but they have a field in which they have no substitute and that is, in the correction of errors of refraction due to corneal irregularities where the wearing of the usual spectacles is found to be ineffective. M. F. WEYMANN, Los Angeles.

**A Common Surgical Failure.**—Excision of the coccyx, because of pain following fracture dislocation, is a sufficiently common procedure to be of interest to all surgeons. The operation has become notorious because of the fact that too often, and to the chagrin of the surgeon, the preoperative symptoms continue after removal of the injured bone.

The cause of this failure is simple. Removal of the dislocated portion by disarticulation at a joint causes failure. The coccyx should be removed with half of the superjacent vertebral body, usually the last sacral segment, leaving a stump of medullary bone to which the soft tissues adhere firmly in healing, avoiding the formation of a painful bursa over the cartilage-covered stump.

We learned this fact by personal observation of the gross pathology at secondary operation. It could have been learned more easily in texts dated as far back as 1900.

HAROLD E. CROWE,  
Los Angeles.